

WHAT IS CLAIMED IS:

1           1.       A pumping system comprising:  
2           a pump barrel that is adapted to be placed into a well casing;  
3           a plunger reciprocatably positioned within the pump barrel, wherein the  
4 plunger has an open top end, a bottom end, and a traveling valve at the bottom end;  
5           a connector coupled to the plunger below the top end; and  
6           a rod coupled to the connector, wherein the rod is translatable to  
7 reciprocate the plunger within the pump barrel using an upstroke and a downstroke, and  
8 wherein the top end of the plunger is adapted to direct particulate into the plunger and  
9 away from the pump barrel upon each upstroke.

1           2.       A system as in claim 1, wherein the top end of cylinder is inwardly  
2 tapered, and wherein the connector is disposed within the cylinder.

1           3.       A system as in claim 1, wherein the connector has at least one  
2 through hole to permit fluids to be moved upwardly through the connector and the  
3 plunger upon each downstroke of the plunger.

1           4.       A system as in claim 1, wherein the pump barrel has a bottom end  
2 and a standing valve in the bottom end.

1           5.       A method for pumping fluids from the ground, the method  
2 comprising:  
3           placing a pumping system into the ground, wherein the pumping system  
4 comprises a pump barrel, a plunger reciprocatably positioned within the pump barrel,  
5 wherein the plunger has an open top end, a bottom end, and a traveling valve at the  
6 bottom end, and a connector coupled to the plunger below the top end; and  
7           reciprocating the plunger within the pump barrel with an upstroke and a  
8 downstroke, and directing particulate into the plunger through the open top end and away  
9 from the pump barrel upon each upstroke.

1           6.       A method as in claim 5, wherein the plunger comprises a cylinder  
2 having an inwardly tapered open top end to direct particulate into the cylinder upon each  
3 upstroke.

1                   7.       A method as in claim 5, wherein the plunger has a traveling valve  
2     at the bottom end, wherein the pump barrel has a standing valve at a bottom end such that  
3     fluids are drawn into the pump barrel through the standing valve upon each upstroke and  
4     are forced through the traveling valve upon each downstroke.

1                   8.       A method as in claim 5, wherein the connector has a through hole  
2     such that fluids passing through the traveling valve move through the through hole and  
3     upwardly through the plunger.